Compilation of Public Comments
Indian Bayou, Little River, Flat Creek TMDLs for Oxygen-Demand
January 2001

Commenter	Date received	Waterbody (ies)	Summary of comment	Summary of LDEQ response
Michael Tritico, President of RESTORE	2/22/01	Indian Bayou	The TMDL indicated that oxygen-demand is caused by sediment-housed oxygen demanding substances, and there is no citation as to where the sediment has originated from. Remedial action should be taken at present and to ensure no future problems.	The Indian Bayou TMDL was not intended for remediation of sediments. The TMDL addresses the present/future point and nonpoint sources of oxygen-demand loading. The goal is for reduction of man-made nonpoint sources of oxygen-demand loading along with a waste load allocation (WLA) of zero.
		Indian Bayou	Disagree with LDEQ's statement regarding slight growth along the bayou. Several subdivisions have been developed and others will follow. Recommends LDEQ account for growth in this and any TMDL.	While LDEQ uses the most current land use data available through its GIS center in TMDL development, information/comments provided by local citizens are quite valuable. The TMDL addresses this growth in its load allocation (LA) reductions and WLA of zero. Future growth, as well as model uncertainty and data inadequacies, is accounted for in the margin of safety of 20%.
		Indian Bayou	Would like information on changes LDEQ and Wiland Consulting, Inc. made to the QUAL-TX model.	LDEQ's modification to the QUAL-TX model includes incorporation of reaeration equations, temperature correction factors, and default values based on characteristic Louisiana streams. LDEQ also made a few changes to ensure its proper running on the Department's PCs and for it to be more user-friendly. A complete listing of the changes can be found at the LDEQ TMDL website.

William B. Richardson, Chancellor, LSU Ag Center	2/20/01	Flat Creek and Indian Bayou	How is the distinction made between man-made and naturally occurring nonpoint sources of pollution? What is the scientific basis for this determination?	LDEQ understands the concern about the distinction of oxygen-demanding substances. LDEQ utilizes estimates of the natural sediment oxygen demand, based upon studies done in unimpaired reference streams, as the natural load. This number is subtracted from the measured in-stream load to provide the estimated man-made load. The State does not have sufficient resources or time to get actual measurements of natural loading at each site due to the court-ordered schedule for TMDL development.
		Flat Creek and Indian Bayou	There is no technology available to approach the goal of 115% reduction in man-made nonpoint source contributions. Expectations that this reduction can be achieved will lead to producer discouragement and disenchantment.	LDEQ realizes that pollutant loading reductions greater than 100% are not possible. When the TMDL models project reductions greater than 100%, some portion is taken from the natural load (not feasible or desirable). TMDL models are simply tools that assist LDEQ in establishing goals for improving and protecting water quality.
		Flat Creek and Indian Bayou	Has an analysis been done on the economic cost of TMDL's to the agricultural community? What changes in agronomic practices will be required, what will be the costs associated with these changes, and how will these increased requirements impact overall profitability?	LDEQ has not done an economic analysis on TMDL costs to the agricultural community. Currently, TMDLs will not result in regulatory requirements being placed upon the agricultural community. LDEQ will continue to work with the community to encourage voluntary implementation of BMPs in those areas which have TMDLs developed. Utilizing the Water Quality Act Section 319 program funding, LDEQ will continue to provide fiscal support to the cooperating agencies and landowners to implement BMPs.

		Flat Creek and Indian Bayou	It may be necessary to seek an agricultural primary designation for stream segments that have been modified over the past 75-100 years solely for agricultural practices. Otherwise, attempting to meet stringent standards in these areas could lead to the removal of profitable agriculture in these basins. There are major differences in each agricultural commodity system regionally and technologically. Feasible effluent management recommendations will also need independent/site-specific evaluation.	LDEQ is also aware that many of our impaired streams have been hydrologically modified for agricultural purposes and may be eligible for a water quality standard or use change. LDEQ also agrees that the dissolved oxygen criterion of 5mg/L is not attainable or applicable to many of our slow-moving streams. LDEQ is working on establishing more appropriate criteria through the use attainability process. This process involves a lengthy timeframe because USEPA must approve all use attainability analyses.
		Flat Creek and Indian Bayou	The LSU AgCenter strongly supports appropriate efforts to improve water quality and encourage good environmental stewardship in agriculture. Goals must be based on good science and consideration must be given to costs. The AgCenter has aided in development of commodity-specific BMP outreach manuals. BMPs will be encouraged through enhanced education and outreach.	LDEQ is aware of the efforts made to promote the use of BMPs, and LDEQ applauds your efforts and encourages the continuation of your education and outreach efforts. BMPs have been and will continue to be beneficial to the state's waterbodies, and as TMDLs are developed, it will become ever more important to document the utilization and effectiveness of agricultural BMPs.
C. A. "Buck" Vandersteen, Exec. Director, Louisiana Forestry Association (LFA)	2/22/01	Flat Creek and Indian Bayou	The LFA has taken great strides to ensure BMP implementation.	LDEQ is aware of the diligent efforts made by the LFA to promote the use of best management practices (BMPs), and encourages the continuation of the training programs. BMP use has definitely been beneficial to the health of the state's waters, and as more TMDLs are developed, it will be increasingly important to document these successes.
		Flat Creek and Indian Bayou	There is no separation between man-made pollution and natural pollution in the TMDL.	The natural load is represented by estimates of the natural sediment oxygen demand, based upon studies done in reference (unimpaired) streams. This load is subtracted from the measured in-stream load to provide the estimated man-made load. While it would be better to have actual measurements of each natural loading for waterbodies requiring TMDLs, the State does not have sufficient resources for this type of testing.

		Flat Creek and Indian Bayou	The technology is not available to enable a reduction in oxygen-demanding substances by 50-75%. Dissolved oxygen (DO) standards between 3-5 ppb are not attainable in many slow moving streams across the state.	LDEQ agrees with LFA that 5 mg/L is not a criterion applicable to Louisiana's many slow-moving streams. LDEQ is currently working to establish more appropriate criteria through the use attainability analysis (UAA) process, which must be approved by USEPA prior to promulgation. As a result, criteria revisions are a very lengthy process.
		Flat Creek and Indian Bayou	More time is needed to evaluate the TMDLs, while incorporating more participation by the scientific community in the TMDL program.	Louisiana is under a federal court-ordered schedule for TMDL development. The TMDL's for the Calcasieu and Ouachita Basins must be completed by the end of this year; therefore, LDEQ must proceed with the finalization of these TMDLs. TMDLs can be revised at any time to reflect new data and technology related to the waterbody, so any new data LDEQ could use to enhance TMDLs is welcomed.
Brian D. Sugden, Forest Hydrologist, Plum Creek Timber Co.	2/23/01	Flat Creek	LDEQ is commended for moving forward with a UAA to procure a more applicable standard. LDEQ's proposed standard of 3mg/L for summer months is much more reasonable, although there is doubt as to whether even this standard is attainable in all years.	LDEQ appreciates the accolades in regards to our pursuit of a more applicable DO standard.
		Flat Creek	The man-made component of the nonpoint source load is already very small because BMPs have been/are being effectively implemented in this watershed. There can be no more reduction in man-made loading from forestry lands, even with the LDEQ's proposed revised DO criteria of 3 mg/L. The standard is unattainable given the natural background loading.	LDEQ acknowledges and applauds the efforts the forestry industry has taken in implementation of BMPs. As TMDLs are developed for forested watersheds, the documentation of these practices will become even more critical.
		Flat Creek	The entire basis for TMDL modeling are single water quality measurements at three sites in the entire watershed.	Multiple sampling events would definitely be preferable, but it is not currently feasible. Under the present time constraints and limited laboratory resources, LDEQ simply cannot conduct multiple sampling events of the TMDL-targeted streams.

		Flat Creek	LDEQ implies that DO levels of 4.5 mg/L are attainable with no man-made loading. The explanation of this scenario should be expanded in order to be fully understood. What are the natural loading rates and what were these numbers based on?	The input dataset for one of the summer projection runs was used. The CBOD nonpoint load, NBOD nonpoint load, and SOD were changed in order to represent 100% reduction of man-made loading. These 3 parameters were reduced to natural background levels (their sum is 2.0 g/m2/day), and the values were obtained from the spreadsheet in Appendix J. For the no-load scenario, the spreadsheet is used by entering 100% in the appropriate column. The spreadsheet then calculates the input values that are used to obtain a 100% reduction. The background benthic oxygen demand of 2.0g/m^2/ day was estimated from LDEQ's collection of reference stream data. LDEQ's protocol at the time of this TMDL was to use a 2.0g/m^2/ day background value. This was the best estimate using the available data.
		Flat Creek	The TMDL does not specify the sources of oxygen-demanding substances in the watershed. Forestry was listed in a table of land uses. If BMPs are being implemented according to preventing possible contributions to loading, what is the forestland source?	LDEQ has not conducted runoff studies in this watershed in order to pinpoint the sources of nonpoint BOD loading.
		Flat Creek	The TMDL excluded a known point source discharger in the watershed. It is important to know what they are and can discharge in comparison to nonpoint sources of oxygen-demanding substances.	At the time of the survey for Flat Creek, there was no flow in the main stem or its tributaries. Therefore, the flow from the village of Sikes did not reach Flat Creek. Due to distance, time, and the fact that DO is non-conservative, the effluent has time to recover in the tributary before the flow reaches Flat Creek.
		Flat Creek	The TMDL was calculated during rare drought and temperature conditions for this area. When using 1999 ambient monitoring data taken from this area, Flat Creek would have required only a minimal amount of loading reduction. The TMDL should acknowledge this condition.	According to data from NOAA, there is no difference in drought conditions when comparing the middle of July 2000 and the middle of July 1999. Actually, the Palmer Index shows the conditions in the Flat Creek area during the survey were classified as near normal, rather than drought conditions.
		Flat Creek	The TMDL did not specify exactly what amount of the oxygen-demanding substances was man-made or natural.	The spreadsheet in Appendix I, "Calibration Model Nonpoint Load Equivalent Calculations," contains the information needed to do the desired calculations.

		Flat Creek	The TMDL should further clarify the future monitoring of Flat Creek. According to LDEQ's rotating basin schedule for monitoring, the Ouachita Basin would not be monitored until 2004. There is a concern that load allocations would have another rare, dry year in 2004, which would infer the BMPs as being ineffective and the opposite is just as likely to happen.	Refer to response #7 and these websites: • www.cpc.ncep.noaa.gov/products/analysis_monitoring/ /regional_monitoring/palmer/2000/07-15-2000.gif • www.cpc.ncep.noaa.gov/products/analysis_monitoring/ regional_monitoring/palmer/1999/07-17-1999.gif
		Flat Creek	The Flat Creek TMDL model was not "verified" by running it against a second set of measurements. LDEQ should explain the acceptability for doing so solely for this TMDL.	Due to a court-ordered schedule of completion for TMDLs, LDEQ does not have the time needed to do a verified model.
William Cleveland, International Paper, Forest Resources Division	3/7/01	Flat Creek	International Paper is participating in implementation of BMPs for forestry. EPA and LDEQ are applauded for their efforts to satisfy the requirements of the consent order driving the development of TMDLs; however, there is concern about whether these will be scientifically defensible TMDLs.	LDEQ applauds your efforts to implement BMPs for forestry and encourages the continuation of these efforts. This has been and will continue to be beneficial to the state's water and forest resources. With the development of TMDLs, it will become ever more important to document the utilization and effectiveness of forestry BMPs. LDEQ will continue to lend support through its Nonpoint Source Management Program.
		Flat Creek	Applauds LDEQ for the completeness of the information provided in this report.	LDEQ appreciates the compliment.
		Flat Creek	The model results show that Flat Creek is unable to achieve a DO of 5mg/L during the critical season, even with elimination of man-made loadings to the stream. This confirms that the DO criterion is inappropriate for this waterbody and supports the use attainability analysis proposed criterion of 3mg/L.	LDEQ is working on the use attainability analysis to amend the current DO criterion to 3mg/L. This involves a fairly lengthy timeframe because EPA must first approve the new criteria before it is promulgated.

		Flat Creek	The zero flow conditions may exceed the capabilities of the water quality model. The model does include reaeration equations for very low flow conditions, but there may be other aspects of modeling very low flow conditions that should be pointed out. For the future, potential limitations of models should be clearly stated in the TMDL report along with an assessment of the possible implications that these limitations may have on the resulting TMDL.	Some changes have been made in the report based on these comments. The "No Load" model input/output and the corresponding loading spreadsheet have been added to the report, and changes were made in the justifications in Table 4.
		Flat Creek	The number of water quality observations is insufficient for a defensible TMDL. Water quality data used in the modeling analysis consist of a single measurement, at each of three locations, for CBOD, NBOD, DO, and temperature—due to equipment malfunctions. Single values of CBOD and NBOD are inadequate to properly characterize a waterbody.	LDEQ does not disagree with your comments regarding the number of measurements and sampling points used in developing the input data for this TMDL. However, under the present time constraints and limited laboratory resources, LDEQ cannot conduct multiple sampling events of the streams targeted for TMDL development. While multiple sampling events would be preferable, it is simply not feasible at this time.
		Flat Creek	Variation in nonpoint source loads needs to be justified. A fundamental premise of water quality modeling is that the selection of model inputs, and their variation from reach-to-reach, must be made on a rational basis rather than simply "curve fitting" the observed data.	The reason there is a large change in loads is the stream geometry changes.

		Flat Creek	Field measurement of SOD should be made. The reduction in loading determined by the modeling analysis is driven almost entirely by the estimate of SOD. Because nonpoint source loads are believed to manifest as SOD during the critical season, it is possible to perform direct measurement of the actual loads.	It would be preferable to have actual measurements of the natural loading and the SOD at each waterbody for which TMDLs must be developed, but the State does not have sufficient resources or time to do this type of work at this time. If we were able to get actual measurements, there would be no way to know which portion is man-made and which portion is natural. The development of TMDLs is subject to a federal court-ordered schedule. Calcasieu and Ouachita River Basin must be completed by the end of this year. Therefore, LDEQ must proceed with finalizing these TMDLs. LDEQ welcomes any new data that you can provide that would enhance these and future TMDLs developed for Louisiana.
		Flat Creek	The procedure for determination of man-made loads relies heavily on assumption of reference stream SOD. The reduction in man-made loads is derived from the modeling analysis and a series of calculations that attempt to separate background benthic loads and man-made loads. No information on the variability of this value is provided in the Flat Creek report.	See comment above.